

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-19. Canceled.

20. (Currently Amended) A device for monitoring ~~fluctuations in an opaque body by categorising scattering characteristics of said opaque body at microwave frequencies, the said~~ device comprising:

- (a) at least one low power microwave emitter for locating adjacent ~~the said~~ opaque body;
- (b) a microwave detector for detecting fluctuations in ~~the said~~ scattering characteristics from said opaque body; and
- (c) a signal processing means for analysing said fluctuations from ~~the said opaque body so as to thereby derive characteristics about said body to calculate scattering parameters for providing a measure indicative of said fluctuations in said scattering characteristics.~~

21. (Previously Presented) A device as claimed in claim 20 wherein said emitter and detector are formed as one unit.

22. (Currently Amended) A device as claimed in claim 20 wherein ~~said opaque body comprises a human body and said signal processing means extracts a heart rate from said fluctuations~~ is set to provide a measure indicative of a heart rate of said human body.

23. (Currently Amended) A device as claimed in claim 20 wherein ~~said opaque body comprises a human body and said signal processing means extracts a respiration rate from said fluctuations~~ is set to provide a measure indicative of a respiration rate of a human body.

24. (Currently Amended) A device as claimed in claim 20-23 wherein said device is portable and is configured to be located near the a chest of the a human body.

25. (Currently Amended) A method of monitoring ~~fluctuations in the density of an opaque body by categorising scattering characteristics of said opaque body at microwave frequencies~~, the method comprising the steps of:

- (a) locating a low power microwave emitter adjacent said opaque body;
- (b) monitoring ~~the scattering properties~~ characteristics of said opaque body so as to produce a monitor signal; and
- (c) ~~utilising fluctuations in said monitor signal over time to infer fluctuations in said opaque body~~ processing said monitor signal over time to calculate scattering parameters for said opaque body derived from fluctuations in said monitor signal.

26. (Currently Amended) A method as claimed in claim 25 wherein said body comprises a human body said processing includes calculating two-port scattering parameters  $s_{11}$ ,  $s_{12}$ ,  $s_{21}$ , and  $s_{22}$  for analyzing said fluctuations in said monitor signal.

27. (Currently Amended) A method as claimed in claim 26-25 wherein said fluctuations include alterations in the-a blood flow rate within the-for a human body.

28. (Currently Amended) A method as claimed in claim 25 wherein said fluctuations include alterations in the-a respiration rate in the-for a human body.

29. (Currently Amended) A method as claimed in claim 25 wherein said low power microwave emitter is configured to be located adjacent the-a chest of the-a human body.

30. (Currently Amended) A method as claimed in claim 25 wherein said low power microwave emitter includes two antennas, one for output and one for input at least one output antenna and at least one input antenna.

31. (Previously Presented) A method as claimed in claim 25 wherein said low power microwave emitter includes only one antenna.

32. (Currently Amended) A remote monitoring system for monitoring a series of patients at remote locations, said monitoring ~~systems~~system comprising:

(a) ~~a series-plurality of portable monitoring devices according to claim 20 for monitoring a human body by categorizing scattering characteristics of said opaque body at microwave frequencies, each of said device further including units for monitoring fluctuations in a human, the monitoring units including at least one low power microwave emitter for locating adjacent the human body, a microwave detector for detecting in the scattering characteristics from the human body; a signal processing means for analysing said fluctuations in the power so as to thereby derive characteristics about said body, and a wireless communications interface for communication characteristics about said body communicating said measure with a spatially separated base station;~~

(b) ~~a series of one or more base stations, each further interconnected with an information distribution network, wherein said base stations are adapted to receive receiving said characteristics-measure from at least one of said portable monitoring units and forwarding them said measure to a centralised computing and storage resource;~~

(c) ~~a centralised computing and storage resource for receiving, storing and monitoring said characteristics-measure.~~

33. (Currently Amended) A system as claimed in claim 32 wherein said system further includes analysis means for analysing said ~~characteristics-measure~~ for identifying predetermined behaviours and raising a notification alarm upon the occurrence of said predetermined behaviours.

34. (New) A device as claimed in claim 20 wherein said signal processing means is adapted to calculate two-port scattering parameters  $s_{11}$ ,  $s_{12}$ ,  $s_{21}$ , and  $s_{22}$  for analysing said fluctuations in said scattering characteristics.

35. (New) A device as claimed in claim 20 wherein said fluctuations are indicative of the density of said opaque body.

36. (New) A device as claimed in claim 20 wherein said low power microwave emitter includes at least one output antenna and said microwave detector includes at least one input antenna.